

PATENT COOPERATION TREATY

From the Japan Patent Office (INTERNATIONAL SEARCHING AUTHORITY)

PCT

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(Implementing Regulation 40 bis)
(PCT Rule 43bis.1)**

To: Agent for Applicant Mr. Hisao KOMORI
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Date of mailing (day/month/year)	28. 12. 2004	
FOR FURTHER ACTION See paragraph 2 below		
International application No. PCT/JP2004/014636	International filing date (day/month/year) 05. 10. 2004	Priority date (day/month/year) 18. 11. 2003
International Patent Classification (IPC) Int. Cl. ⁷ G01S13/42		
Applicant Murata Manufacturing Co., Ltd.		

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220

3. For further details, see notes to Form PCT/ISA/220

Date of completion of this opinion 10. 12. 2004	
Name and mailing address of the ISA/JP Japan Patent Office 3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan	Authorized officer Koichi MATSUSHITA Telephone No. 03-3581-1101 Ext. 3257
<div style="display: flex; justify-content: space-between; align-items: center;"> 2S 3206 </div>	

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/014636

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purpose of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
 - a sequence listing
 - table(s) related to the sequence listing
 - b. format of material
 - in written format
 - in computer readable form
 - c. time of filing/furnishing
 - contained in the international application as filed.
 - filed together with the international application in computer readable form.
 - furnished subsequently to this Authority for the purposes of search.
3. In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2004/014636

Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement																									
<p>1. Statement</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Novelty (N)</td> <td>Claims</td> <td>1-3, 5-11</td> <td>YES</td> </tr> <tr> <td></td> <td>Claims</td> <td>4</td> <td>NO</td> </tr> <tr> <td style="width: 30%;">Inventive step (IS)</td> <td>Claims</td> <td>1-3, 5-11</td> <td>YES</td> </tr> <tr> <td></td> <td>Claims</td> <td>4</td> <td>NO</td> </tr> <tr> <td style="width: 30%;">Industrial applicability (IA)</td> <td>Claims</td> <td>1-11</td> <td>YES</td> </tr> <tr> <td></td> <td>Claims</td> <td></td> <td>NO</td> </tr> </table>			Novelty (N)	Claims	1-3, 5-11	YES		Claims	4	NO	Inventive step (IS)	Claims	1-3, 5-11	YES		Claims	4	NO	Industrial applicability (IA)	Claims	1-11	YES		Claims		NO
Novelty (N)	Claims	1-3, 5-11	YES																							
	Claims	4	NO																							
Inventive step (IS)	Claims	1-3, 5-11	YES																							
	Claims	4	NO																							
Industrial applicability (IA)	Claims	1-11	YES																							
	Claims		NO																							
<p>2. Citations and explanations:</p> <p>Document 1: Japanese Unexamined Patent Application Publication No. 11-337635 (FUJITSU TEN LIMITED) December 10, 1999</p> <p>In view of Document 1 cited in the international search report, the invention claimed in Claim 4 is not novel and involves no inventive step. Document 1 discloses an idea in which, in calculating the angle of a target in a radar system for scanning with beams, an intersection of straight lines that approximate a power distribution on the left and right sides of a scan angle corresponding to a maximum power in the power distribution corresponding to scan angles is used as a reference scan angle of the target (see paragraphs [0025] to [0027] and Fig. 10).</p> <p>In the invention claimed in Claims 1 to 3 and 6 to 11, the idea of approximating a reception signal strength distribution by an isosceles triangle having a beam azimuth width as its base is described in none of the documents cited in the international search report, and is not obvious to a person skilled in the art.</p> <p>In the invention claimed in Claim 5, the idea of performing processing, if the length of the base of the approximate isosceles triangle is smaller than the beam azimuth width of a main lobe of the beam, such that an azimuth corresponding to the vertex of the approximate isosceles triangle is not treated as a central azimuth of the target, is described in none of the documents cited in the international search report, and is not obvious to a person skilled in the art.</p>																										

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International application No.

PCT/JP2004/014636

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported the description, are made:

In Claim 9, the phrase "if the reception signal strength distribution within a distance to the target extends further than the beam azimuth width in the azimuth direction" is unclear. According to paragraphs [0081] to [0088] in Description, a determination as to whether a plurality of targets exist is made by detecting the deviation of a peak azimuth on the basis of a comparison of an azimuth at which the reception signal strength reaches its peak and an azimuth range where the reception signal strength distribution exceeds a predetermined threshold. Therefore, the correspondence between the description in Claim 9 and Description is unclear.